HIV

Unilateral syphilitic perioptic neuritis in a patient coinfected with human immunodeficiency virus type 1

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Perioptic neuritis caused by secondary syphilis is a rare ophthalmic manifestation in the HIV-infected host. Early diagnosis and treatment of this condition is required to prevent further visual damage. We report a case of unilateral syphilitic perioptic neuritis in a patient coinfected with HIV-1.

Perioptic neuritis usually occurs as a bilateral condition in secondary syphilis. To our knowledge, this report is the first that describes the rare occurrence of unilateral syphilitic perioptic neuritis in a patient who is also infected with HIV-1. The diagnosis of this condition in this patient influenced the management of secondary syphilis and prevented progression of inflammation to the optic nerve substance and permanent visual loss.

CASE REPORT

A 42-year-old homosexual man presented to the genitourinary medicine department with a 1-week history of orogenital ulcers, associated with a rash on the palms, soles and trunk. Although he was seeing cobweb-like images in his right eye for the same duration, he reported this 2 days later to the ophthalmologists at the eye casualty. His medical history was unremarkable with no previous ocular symptoms. On examination, the rash was suggestive of secondary syphilis. He had bilateral non-tender inguinal lymphadenopathy. Dark ground microscopy of the genital ulcer exudate was negative for spirochaetes. The right optic disc was swollen (fig 1) with a few cells in the overlying vitreous and the left optic disc was unaffected. The visual acuities were 6/5 right and 6/18 left (an amblyopic eye). There was no relative afferent pupil defect or evidence of retinopathy in either eye. Visual fields and colour vision were normal.

Syphilis serology showed reactive enzyme immunoassay by both Abbott Murex ICE Syphilis (Abbott Murex, Dartford, UK) and Dade Behring Enzygnost (Dade Behring Enzygnost, Marburg, Germany), IgM enzyme-linked immunosorbent assay, treponema pallidum serodia particle agglutination test at $\geqslant$ 1:1280 and venereal diseases reference laboratory (VDRL) test at 1:256. HIV-1 antibody test was positive with HIV-1 RNA polymerase chain reaction of 25 500 copies/ml, and a CD4 count of 360 cells/μl. CT scan of the head was normal. Cerebrospinal fluid examination findings were: normal opening pressure; white cell count 55 cells/ml (82% lymphocytes); protein 1.2 g/l; glucose 2.9 mmol/l (plasma glucose 5.4 mmol/l); and VDRL negative and TPPA reactive at 1:160. Cerebrospinal fluid results were thus inconclusive of neurosyphilis. A diagnosis of secondary syphilis with associated perioptic neuritis in the right eye was made and the patient was treated with procaine penicillin 1.8 G intramuscularly and oral probenicid 500 mg four times a day for 17 days. At 2 months after treatment, there was complete resolution of the right optic disc swelling and a 32-fold decline in VDRL titre to 1:8. The patient has remained asymptomatic, and at the last follow-up visit at 15 months the VDRL was negative.

DISCUSSION

This is a case of unilateral optic disc swelling diagnosed in a patient with secondary syphilis who was also infected with HIV-1. The visual acuity in the affected eye remained unimpaired which, in the presence of normal intracranial pressure and inflammatory cells in the vitreous, is consistent with perioptic neuritis—that is, inflammation of the optic nerve meninges but sparing the optic nerve fibres themselves. Perioptic neuritis therefore produces optic disc swelling without affecting visual function. In addition to secondary syphilis, this condition has been described in a variety of inflammatory and infectious eye diseases including meningitis and sarcoidosis.[1]

Perioptic neuritis in secondary syphilis usually occurs as a bilateral condition,[2 3] whereas syphilitic optic neuropathy is more often unilateral. Unilateral syphilitic perioptic neuritis

Abbreviation: VDRL, venereal diseases reference laboratory

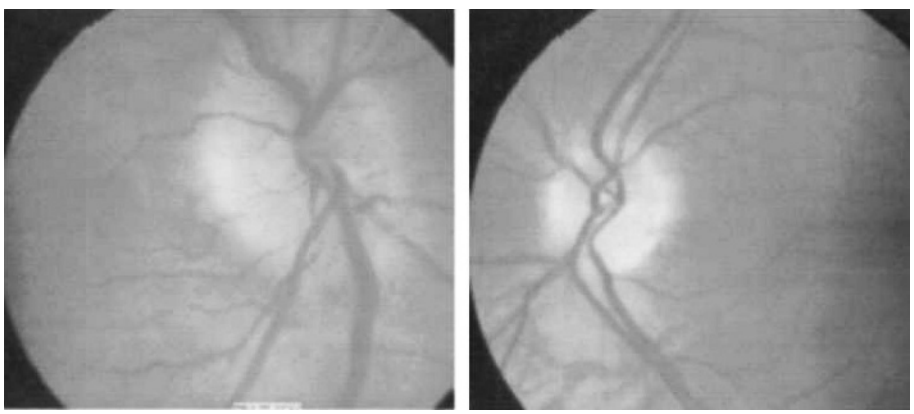

Figure 1 Right optic disc swelling in syphilitic perioptic neuritis, left optic disc is normal.

Learning points/key messages from the case report

- Syphilis should always be included in the differential diagnosis of patients presenting with optic disc swelling, especially in those at risk of sexually transmitted infections
- Patients with secondary syphilis, especially those coinfected with HIV-1, should be questioned about visual symptoms. If they have even mild visual problems, they should have an ophthalmological review
- The diagnosis of syphilitic ocular disease, as in this case, affected the way secondary syphilis was managed.
- Syphilitic eye disease can progress more rapidly in HIV-infected patients, hence they need early diagnosis and prompt treatment.

presenting as the big blind spot syndrome has been reported once previously.[4] Ocular syphilis is often more severe in HIV-infected patients[5] and its occurrence does affect the way syphilis is treated.[3] Early recognition and appropriate management of these cases are therefore vital to prevent progression. The ineffectiveness of conventional benzathine penicillin in the treatment of ophthalmic manifestations of secondary syphilis in the HIV-infected host has been established although a procaine penicillin-containing regimen for the treatment of neurosyphilis is adequate.[3]

We advocate that patients with secondary syphilis, especially those coinfected with HIV-1, should be questioned about visual symptoms, and those who have even mild visual problems should have an ophthalmological review. Conversely, syphilis should always be included in the differential of patients presenting with optic disc swelling, especially in those patients at risk of sexually transmitted infections. Adequate management of this case resolved the syphilitic perioptic neuritis before there was progression of inflammation to the optic nerve substance and permanent visual loss.

AUTHORS CONTRIBUTIONS

KNS and MD were involved in the initial presentation and care of the patient. MSTB and KNS continue to follow-up the patient for his HIV care. MSTB and MD carried out the literature review. MSTB wrote the initial manuscript, which KNS and MD reviewed and edited. MSTB rewrote the final manuscript for submission.

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